AMENDMENTS TO THE CLAIMS

The listing below of the claims will replace all prior versions and listings of claims in the present application:

Listing of Claims:

Claim 1 (currently amended): A method of producing a molybdenum-silicide-type heating element containing essentially molybdenum silicide and alloys of that material, said method comprising the steps of: producing a material that contains substantially $Mo(Si_{1-x}\ Al_x)_2$ and Al_2O_3 by mixing a molybdenum aluminum silicide $Mo(Si_{1-y}Al_y)_2$ with SiO_2, wherein the SiO_2 is at least 98% pure and ~~wherein~~ wherein x lies in the range of 0.4 - 0.6; and forming a heating element from the produced material, wherein the heating element includes on its surface a protective layer consisting essentially of Al_2O_3 ~~oxide layer~~ that does not peel from the surface of the heating element under thermal cycling of the heating element between room temperature and about 1500°C.

Claim 2 (previously presented): A method according to Claim 1, wherein the SiO_2 present in the mixture is a silicate and does not affect molybdenum silicide crystal lattice symmetry.

Claim 3 (canceled)

Claim 4 (previously presented): A method according to Claim 1, wherein x lies in the range of 0.45 - 0.55.

Claim 5 (previously presented): A method according to Claim 1, including the step of partially substituting at least one of Re and W in the material $Mo(Si_{1-x} Al_x)_2$ for molybdenum.

Claim 6 (currently amended): An electrical heating element that is substantially of the molybdenum silicide type and alloys of that material, said element ~~comprising~~ consisting essentially of the materials $Mo(Si_{1-x} Al_x)_2$ and Al_2O_3, wherein x lies in the range of 0.4 - 0.6; wherein SiO_2 having a purity of at least 98% is included in the material; and wherein the heating element includes on its surface a protective layer consisting essentially of Al_2O_3 ~~oxide layer~~ that does not peel from the surface of the heating element under thermal cycling of the heating element between room temperature and about 1500°C.

Claim 7 (canceled)

Claim 8 (previously presented): A heating element according to Claim 6, wherein x lies in the range of 0.45 - 0.55.

Claim 9 (previously presented): A heating element according to Claim 6, wherein molybdenum in the material $Mo(Si_{1-x}\ Al_x)_2$ is partially replaced with at least one of Re and W.

Claim 10 (previously presented): A method according to claim 2, wherein the silicate is mullite.

Claim 11 (previously presented): A method according to claim 2, wherein the silicate is sillimanite.